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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,158	12/20/2001	Zhong-Min Wei	21829/230 (EBC-015)	9509

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Michael L. Goldman
NIXON PEABODY LLP
Clinton Square
P.O. Box 31051
Rochester, NY 14603

EXAMINER

KUBELIK, ANNE R

ART UNIT PAPER NUMBER

1638

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,158

Applicant(s)

WEI, ZHONG-MIN

Examiner

Anne R. Kubelik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6 October 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

1. Claims 1-9 are pending. Claim 6 is drawn to a non-elected invention, and is thus withdrawn from consideration. Claims 1-5 and 7-9 are examined to the extent they read on hypersensitive response elicitor proteins from *E. amylovora*, *E. chrysanthemi*, *P. syringae*, *P. solanacearum*, and a *Xanthomonas* species.
2. This application contains claim 6, drawn to an invention nonelected with traverse in the response filed 2/11/2003. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144). See MPEP § 821.01.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. The rejection of claims 1-3 and 7-9 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention is withdrawn in light of Applicant's amendment to the claims.
5. The rejection of claims 1-3 and 7-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention is withdrawn in light of Applicant's amendment to the claims.
6. In the papers filed 6 October 2003, Applicant states that a 1449 was filed on that date. However, this paper was not included with the response, and thus could not be considered.

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Claim Rejections - 35 USC § 102

7. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Wei et al (US Patent 5,776,889, filed June 1995) taken with the evidence of each of Mullet et al (1996, Plant Growth Reg. 20:119-124), Chaves et al (2002, Annals. Bot. 89:907-916), and Bruce et al (2002, J. Exp. Bot. 53:13-25). The rejection is modified from the rejection over Wei et al alone set forth in the Office action mailed 1 May 2003, due to amendment of the claims. Applicant's arguments filed 6 October 2003 have been fully considered but they are not persuasive.

Wei et al teach a method of imparting pathogen resistance to plants by topical application of hypersensitive response elicitors from *E. amylovora*, *E. chrysanthemi*, *P. syringae*, *P. solanacearum*, and *X. campestris* (claims 1-18 and 24). Wei et al does not explicitly teach the conditions in which crop plants are typically grown.

Mullet et al teach that crop plants are inherently and commonly grown in drought conditions (pg 119, left column, paragraph 1).

Chaves et al teach that periods of water deficit often occur in a plant's life cycle (pg 907, left column, paragraph 1).

Bruce et al teach that in the U.S., maize commonly experiences drought stress (pg 14, right column, paragraphs 2-3).

Thus, some of the plants of Wei, to which hypersensitive response elicitors have been topically applied, would necessarily be grown in drought stress conditions at least at some point in the plant's life cycle, and the method of imparting pathogen resistance taught by Wei et al is inherently one of imparting drought resistance.

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Applicant urges that the plants of Wei et al were grown in greenhouse conditions, and that Wei et al does not teach or suggest growing the plants under drought conditions (response pg 4).

This is not found persuasive because each of Mullet et al, Chaves et al, and Bruce et al teach that plants are inherently grown in drought conditions.

Applicant urges that because the plants of Wei et al were never grown in drought conditions this method step cannot necessarily be taught in Wei et al and thus a method of imparting drought stress resistance is not inherently taught by Wei et al (response pg 4).

This is not found persuasive because given that plants are inherently grown in drought conditions and given that Wei et al does not teach that their plants must be protected from drought, Wei et al inherently teaches the instantly claimed method.

8. Claims 1-5 and 7-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Wei et al (US Patent 5,859,324, filed June 1995) taken with the evidence of each of Mullet et al (1996, Plant Growth Reg. 20:119-124), Chaves et al (2002, Annals. Bot. 89:907-916), and Bruce et al (2002, J. Exp. Bot. 53:13-25). The rejection is modified from the rejection over Wei et al alone set forth in the Office action mailed 1 May 2003, due to amendment of the claims. Applicant's arguments filed 6 October 2003 have been fully considered but they are not persuasive.

Wei et al teach a method of imparting pathogen resistance to plants by topical application of a hypersensitive response elicitor from *E. amylovora* (column 20, line 52, to column 23, line 21) and plants to which has been topically applied hypersensitive response elicitors from *E. amylovora*, *E. chrysanthemi*, *P. syringae*, *P. solanacearum*, and *X. campestris* (claims 1-18). Wei et al does not explicitly teach the conditions in which crop plants are typically grown.

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The teachings of each of Mullet et al, Chaves et al, and Bruce et al are discussed above.

Thus, some of the plants of Wei, to which hypersensitive response elicitors have been topically applied, would necessarily be grown in drought stress conditions at least at some point in the plant's life cycle, and the method of imparting pathogen resistance taught by Wei et al is inherently one of imparting drought resistance.

Applicant urges that for the reasons above, Wei et al fails to inherently anticipate the claimed invention (response pg 5).

This is not found persuasive for the reasons above.

Double Patenting

9. Claims 1-3 and 7-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 5, 9-20, 28-29, 33 and 35 of U.S. Patent No. 6,277,814 taken with the evidence of each of Mullet et al (1996, Plant Growth Reg. 20:119-124), Chaves et al (2002, Annals. Bot. 89:907-916), and Bruce et al (2002, J. Exp. Bot. 53:13-25). The rejection is modified from the rejection set forth in the Office action mailed 1 May 2003, due to amendment of the claims. Applicant's arguments filed 6 October 2003 have been fully considered but they are not persuasive.

U.S. Patent No. 6,277,814 claims a method of enhancing growth in plants by topical application of hypersensitive response elicitors from *E. amylovora*, *E. chrysanthemi*, *P. syringae*, *P. solanacearum*, and *X. campestris*. U.S. Patent No. 6,277,814 does not explicitly claim the conditions in which crop plants are typically grown.

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The teachings of each of Mullet et al, Chaves et al, and Bruce et al are discussed above.

Thus, some of the plants produced by the method of '814, would necessarily be grown in drought stress conditions at least at some point in the plant's life cycle, and the method of imparting pathogen resistance claimed by '814 is inherently one of imparting drought resistance.

Furthermore, hypersensitive response elicitors that are heat stable, glycine rich and that contain no cysteine, as claimed in the issued patent, are a species of the genus of hypersensitive response elicitors, as claimed in the instant application, and anticipate the genus.

Applicant urges that none of the cited claims of '814 teach all the limitations of the instantly claimed invention, that is the claims do not recite growth in drought conditions, the invention of '814 would not necessarily result in the method step of growing in drought conditions (response pg 5).

This is not found persuasive because each of Mullet et al, Chaves et al, and Bruce et al teach that plants are inherently grown in drought conditions.

10. Claims 1-5 and 7-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of U.S. Patent No. 5,776,889 taken with the evidence of each of Mullet et al (1996, Plant Growth Reg. 20:119-124), Chaves et al (2002, Annals. Bot. 89:907-916), and Bruce et al (2002, J. Exp. Bot. 53:13-25). The rejection is modified from the rejection set forth in the Office action mailed 1 May 2003, due to amendment of the claims. Applicant's arguments filed 6 October 2003 have been fully considered but they are not persuasive.

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U.S. Patent No. 5,776,889 claims a method of enhancing growth in plants by topical application of hypersensitive response elicitors from *E. amylovora*, *E. chrysanthemi*, *P. syringae*, *P. solanacearum*, and *X. campestris*. U.S. Patent No. 5,776,889 does not explicitly claim the conditions in which crop plants are typically grown.

The teachings of each of Mullet et al, Chaves et al, and Bruce et al are discussed above.

Thus, some of the plants produced by the method of '889, would necessarily be grown in drought stress conditions at least at some point in the plant's life cycle, and the method of imparting pathogen resistance claimed by '889 is inherently one of imparting drought resistance.

Applicant urges that none of the cited claims of '889 teach all the limitations of the instantly claimed invention, that is the claims do not recite growth in drought conditions, the invention of '889 would not necessarily result in the method step of growing in drought conditions (response pg 5).

This is not found persuasive because each of Mullet et al, Chaves et al, and Bruce et al teach that plants are inherently grown in drought conditions.

11. Claims 1-5 and 7-9 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-18 of U.S. Patent No. 5,859,324 taken with the evidence of each of Mullet et al (1996, Plant Growth Reg. 20:119-124), Chaves et al (2002, Annals. Bot. 89:907-916), and Bruce et al (2002, J. Exp. Bot. 53:13-25). The rejection is modified from the rejection set forth in the Office action mailed 1 May 2003, due to amendment of the claims. Applicant's arguments filed 6 October 2003 have been fully considered but they are not persuasive.

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U.S. Patent No. 5,859,324 claims a method of enhancing growth in plants by topical application of hypersensitive response elicitors from *E. amylovora*, *E. chrysanthemi*, *P. syringae*, *P. solanacearum*, and *X. campestris*. U.S. Patent No. 5,859,324 does not explicitly claim the conditions in which crop plants are typically grown.

The teachings of each of Mullet et al, Chaves et al, and Bruce et al are discussed above.

Thus, some of the plants produced by the method of '324, would necessarily be grown in drought stress conditions at least at some point in the plant's life cycle, and the method of imparting pathogen resistance claimed by '324 is inherently one of imparting drought resistance.

Applicant urges that none of the cited claims of '324 teach all the limitations of the instantly claimed invention, that is the claims do not recite growth in drought conditions, the invention of '324 would not necessarily result in the method step of growing in drought conditions (response pg 5).

This is not found persuasive because each of Mullet et al, Chaves et al, and Bruce et al teach that plants are inherently grown in drought conditions.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne R. Kubelik, whose telephone number is (703) 308-5059. The examiner can normally be reached Monday through Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (703) 308-0198.

Anne R. Kubelik, Ph.D.
December 30, 2003

A handwritten signature in black ink, appearing to read "Amy Nelson", is positioned to the right of the typed name.

**AMY J. NELSON, PH.D
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600**